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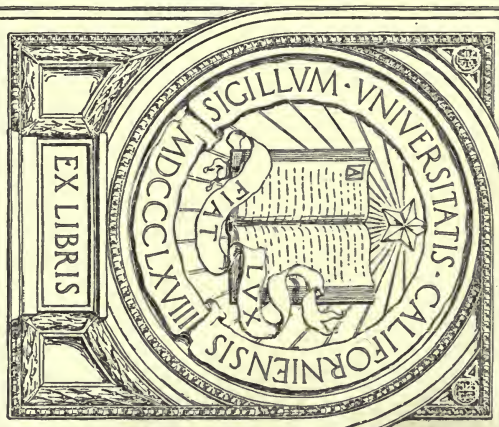
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FAMOUS GOLD NUGGETS
OF THE WORLD



THOMAS JEFFERSON HURLEY



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FAMOUS GOLD NUGGETS OF THE WORLD



COMPILED BY

THOMAS JEFFERSON HURLEY

MEMBER

American Institute of Mining Engineers

And

American Geographical Society



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Sutters' Mill, Coloma, El Dorado Co., Where Marshall Found the Gold Nugget that Electrified the World.



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TO THE PROSPECTOR

Whose hospitality, companionship, hardships, joys and disappointments I have often shared, and whose courage, patience and untiring industry have made it possible for the world to enjoy the nine thousand millions of gold computed to be in existence, this volume is respectfully dedicated.

THOMAS JEFFERSON HURLEY.

TO THE READER.

In these days of wonderful gold discoveries one is apt to forget the big finds of the past, which set the world wild with excitement and gave such impetus to mining about half a century ago. This brief account of famous gold nuggets will help to revive the memories of the golden days of Australia and California, and to show how history tends to repeat itself in gold mining as well as in other mundane affairs. The data has been gathered from many sources, involving a large amount of research, which extended over the face of the globe. In procuring this information the compiler has corresponded with some two hundred persons, to many of whom he is indebted for whatever credit may be attached to his efforts. He ventures to believe that the result will be found of deep interest to all concerned in mining and mining matters.

For much of the material used the compiler is indebted to the Engineering and Mining Journal and American Mining News, of New York; the Mining and Scientific Press, of San Francisco; Mining Reporter, of Denver; Mining Record, of Colorado Springs; the Australian Mining Standard, of Melbourne; Mining and Metallurgical Journal, Los Angeles, California; ex-United States Mining Commissioner R. W. Raymond, and representative mining engineers residing in all parts of the world. With one exception, no mention is made of nuggets found in South America or Mexico, the compiler having been unable to collect reliable data from these countries, excepting as to their gross gold and silver output.

T. J. H.

FAMOUS GOLD NUGGETS.

Gold mining has made rapid strides during the past decade. Not only has the enormous wealth of South Africa astonished the world, but the exploration of the rich fields of Cripple Creek, Oregon, Idaho, Utah, British Columbia and other mining sections of this continent has also revealed vast storehouses of the yellow metal. Nearly every district has its stories of great strikes and immense outputs. On all sides we hear of wonderful pannings, of splendid mill runs, of the discovery of pockets and nuggets that bid fair to rival the grand finds of the golden days of California and Australia.

The twentieth century has been pre-eminently the age of gold. From 1492 to 1850 the total gold production of the world, as estimated by the Bureau of Statistics at Washington, D. C., was \$3,129,720,000. From 1851 to 1899 the total product was \$6,665,631,000, or more than twice as much as during the entire 350 years preceding the half century now closing. The additions to the world's supply of gold during the past four years was as follows:

Date.	Gold production in United States.	Total gold production in the world.
1896	\$53,088,000	\$202,251,000
1897	57,363,000	238,812,000
1898	64,463,000	287,428,000
1899	72,500,000	315,000,000
<hr/>		<hr/>
Total	\$247,414,000	\$1,043,491,000

It is a remarkable coincidence that, though the diameter of the earth separates them, though one lies towards the South Pole and the other towards the North Pole, and a half century intervenes between the discoveries, there is a singularity in the history of mining in Australia and South Africa and that in Alaska and the great Northwest. In each case the aborigines knew of the existence of the yellow metal long before the information reached civilization. Both were barren territories and remote from the haunts of civilized man, and the early miners experienced terrible hardships before the glittering result of their labor exerted its powerful influence in modernizing the bleak and desolate sections where nature had hidden the golden treasure.

Gold seems to have always exerted a magnetic influence on mankind. Its power of fascination was felt as much in the "dark backward and abysm of time" as it is in these days of higher civilization. King Solomon was as noted for his store of gold as for his wisdom, but long before that astute monarch reigned the yellow metal was highly prized and used extensively in primitive arts and manufactures. The earliest known coinage of gold was about 800 years B. C. in the time of Miletus. Four centuries later, it is recorded, the Sicilians used it for coinage purposes. In the earlier centuries of the Christian era placer mining was well established in Southwestern Europe, the Ural Mountains and Asia Minor. We have nothing authentic, however, in the way of statistics of gold mining previous to the discovery of North and

South America, but since then the world's annual production of gold is pretty well known.

The big gold discoveries of this century began in California in 1847, in Australia in 1851 and in British Columbia a few years later. Then came the strikes in Queensland and New South Wales, followed by those in the Transvaal in 1868, and the Witwatersrand in 1886. Now there are frequent strikes, not only in South Africa, but in many of our Western States. The opening up of Cripple Creek, whose output this year will be in the neighborhood of \$30,000,000, is one of the marvels of the times. But there have been no great placer finds in recent years equalling those in Alaska and the Klondike, and it is the ease with which the gold is obtained that has attracted so many thousands to the beaches and creeks of the far Northwest.

The entire production of gold in the United States from 1790 to 1848 amounted to only \$34,000,000. The next year alone \$40,000,000 of the metal was taken out of California soil, and since that period a total of \$2,500,000,000 has been mined in the United States. After the great discovery in California in 1874 the product of the mines there ran up to more than \$50,000,000 a year, but this was beaten by Australia, where in eight years, from 1851, a total of \$500,000,000 was mined, or an average of more than \$60,000,000 a year. One nugget found in the Australian field, weighing 146 pounds, was bought for Queen Victoria in 1858. After the first ten years in California the gold output of the United States became steady, as

new finds in other Pacific coast States averaged the losses caused by the failure of older mines to produce more of the metal.

Antonio de Alvedo, a noted geographer of the last century, in writing of a visit to California, said that all the ravines and plains contained gold scattered up and down. He gave a glowing account of the then little known country in 1789, but no adventurers went there to find the gold that he told about. The white population was not much



Nugget Found at Sam Christian Mine, Montgomery County, N. C., on Southern Railway. Weight 4 Pounds. Picture About Four-Sevenths Actual Size.

over 16,000 when General Sutter and others made the first discovery in 1847. In 1848 the output of the California field was \$5,000,000. In the next five years a total of \$260,000,000 was taken from the gold fields of the

State. From the period of the first discovery up to January 1 of last year the total yield of California has been \$1,314,076,658, or an average for the 50 years of \$26,-283,533—a record which far outstrips that of any other State in the Union.

In the early days many men found nuggets of the size of hen's eggs, and a few washed out chunks as large as apples. It was poor diggings where \$20 or \$25 worth of gold was not panned or rocked out in a day. The best average day's work of a common miner, working alone, yielded about two and a half ounces of gold, worth about \$50.50. Now we hear of men cleaning up several hundreds of dollars in a single day in Alaska and the Klondike.

In 1852 the men who individually washed gold became scarce, and companies of miners were formed to carry on work on a large scale—to dam streams, to make canals for draining rivers and for washing away great banks of earth by water power, and to construct “long Toms” on a mammoth plan. These companies had a capital of hundreds of thousands and in many instances of millions of dollars. We have no doubt that organized effort will produce the best results in Alaska and the Northwest Territory. Gold mining is no longer a field for individual effort. Nowadays mining is dependent upon system, science and the fine economy which makes profit possible. In the Territories named, as in California, the largest profits will come from the operators of combined capital. Good companies are well organized and choose only competent

men for their work, and these men go into the field much better equipped and prepared for achieving results than any individual.

William Ogilvie, the Dominion Land Surveyor, a responsible official of great experience, declares that there are \$70,000,000 of gold already in sight in the Klondike gold region, and that it will be taken out by the individual efforts of the 5,000 miners located in and around Dawson City. But well managed corporations will some day work the tailings left by those individuals, and by scientific, methodical and economical management produce an amount of bullion equal to forty per cent. of the original amount mined, which will be a great and instructive lesson of the amount of gold lost by individual and crude systems of mining.

But it is of the famous gold nuggets of the world, the circumstances under which they were found and their value, rather than of the general characteristics and prospects of particular gold camps, this pamphlet is to treat.

II.

Nearly all great gold nuggets have a history known not only to the miners of the district and country in which they were found, but to well informed mining men throughout the world. In describing some of them, however, we must rely on information which in many cases is not official, but is simply the legend of the prospectors' camp, as related evenings by the hardy miners while seated around a camp fire, resting from the weary search of the day. It is this information, however, that keeps alive the everlasting hope of ultimately striking it rich themselves. The world is indebted to the prospector, whose courage, patience and untiring industry has made it possible for it to enjoy the \$9,000,000,000 of gold computed to exist in the world to-day.

No large nuggets have yet been found in the Klondike. The largest nugget of which we have any official record there is one weighing 34 troy ounces, and worth \$583, taken from Claim 36, on Eldorado Creek.

We believe the largest nugget found in the Yukon was the one found last summer on Claim 34, Eldorado Creek, Klondike, which weighed over 72 ounces, value \$1,158.

The accompanying engraving is made from a photo-

graph, for which we are indebted to the *Engineering and Mining Journal*. It shows the largest nugget so far found in that region. The hand in which it is held will enable the reader to estimate the size very nearly.



Gold Nugget from Atlin Lake District, British Columbia.

This nugget was found on Spruce Creek; it was taken out 126 feet below the surface. Its weight is 84 ounces, and the contents in pure gold are estimated at 50 ounces. It was found on July 8th, 1899. Its value is about \$1,000.

We have reports of thousands of golden nuggets the size of beans, and worth about \$1 each, and hundreds the size of gravel stones. We are indebted to the late George M. Dawson, Director of Mines for Canada, for

the fact that a nugget weighing 52 ounces was found on a branch of the Gilbert River, Province of Quebec, in 1866, and another later weighing 45 ounces. The circumstances of finding the nugget was as follows: A little girl named Clotilde Gilbert was crossing a ford of the stream when she found in the sand a nugget about the size of a pigeon's egg. Her own account as given by Mrs. Chapman is as follows: "My father sent me on Sunday morning for a horse in the field to go to mass; when crossing the stream I saw something shining alongside the water and took it up to show my father. I never thought that such a pebble would make so much noise afterwards."

No other discovery has been made on this continent that so closely resembles the Yukon diggings as the sand-bars along the American, Yuba, Stanislaus and Trinity Rivers, in California, in the memorable years of 1848-'49-'50. But the most important nugget ever found in the United States, and around which the most interest centres for Americans, not because of its size, but because its finding marked the dawn of a new era for the Pacific slope, is the one found by Peter L. Winner and James W. Marshall in the year 1848. It was only about the size of a lima bean, but it started the enormous emigration from the East to the Pacific Slope and California, caused the opening up and development of her mineral industries, and was the forerunner of the more than \$2,000,000,000 worth of bullion that have since been mined from the golden area of the West.

The mining claim, however, which holds the world's record for the greatest production of gold nuggets, both as to size, value and quantity, is the Reed Mine, in Cabarras County, North Carolina, within twenty-four hours' ride by rail from New York city. Taking the nuggets in the order of their weight, and not chronologically, the Reed Mine has yielded nuggets weighing 28 pounds, 17 pounds, 16 pounds, $13\frac{1}{4}$ pounds, $9\frac{1}{2}$ pounds, two 9 pounds, two 8 pounds, 5 pounds, $3\frac{1}{2}$ pounds, two 2 pounds, and $1\frac{3}{4}$ pounds, and an even peck of gold the size of beans and peas. The first discovery was made by a slave, as were also the 17-pound and 16-pound nuggets. In addition a quartz vein has been developed that assays from \$10 to \$300 to the ton.

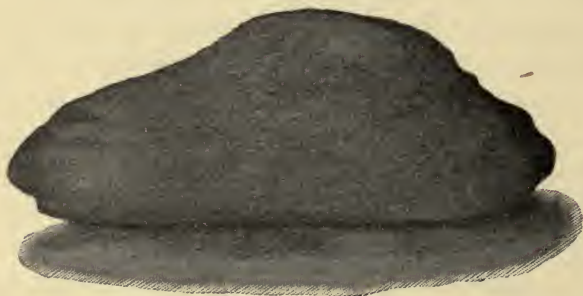
The next greatest find in North Carolina was on the property near Albemarle, Stanley County, now owned by the United Goldfields Corporation. They have now for safe keeping in the vaults of a New York trust company a $10\frac{1}{2}$ -pound nugget, one $8\frac{1}{2}$ pounds, another $5\frac{3}{4}$ pounds, and one weighing 3 pounds, besides a dozen of about 1 pound and a couple of quarts of smaller pieces. Like the Reed Mine, this property has enormous ledges of gold quartz. It may be well to mention that the first gold ever discovered in the United States was found in North Carolina, the records of the United States Mint as far back as 1793 showing several thousand dollars of gold from that State. It is claimed that an 80-pound nugget was found near the Reed Mine, but we have no official data as to the discovery.

The Reed plantation, with its yield of nearly \$60,000 in big nuggets alone, and its hundreds and thousands of dollars in smaller nuggets and dust, was not the only phenomenal producer of gold in the pioneer American diggings. The Beaver Dam Mine, in Montgomery County, was a wonder. This was the property of a man named Thomas Faney, who up to the time of the discovery of gold on it was a thrifty, steady-going citizen. When he began picking up \$700 worth of gold a day, however—which was the amount his diggings yielded for months—his sudden riches turned his head. He took to drink, and indulged in all sorts of extravagances. He was a great deer hunter, and it is said that it became his favorite pastime to go hunting with bullets run from pure gold. Old residents of the locality tell of the killing of a buck by a hunter, long after Faney's death, in the shoulder of which, when this deer was dressed, he found a flattened piece of gold, while in its hip was another, nearly \$100 worth of gold in all. It was supposed that these were a pair of Faney's bullets with which he had wounded the deer some time when he was hunting. Faney drank himself to death while his property was still yielding a fortune.

If the Barringer farm, in Stanley County, were giving up its gold as it did formerly, it would be a good enough Klondike for any ordinary man. The owner of this property washed for months out of the gravel in the small creek that flowed through it from 300 to 500 penny-weights of gold a week. At last he came to the end of

the gravel deposit, and out-cropping from a knoll at the side of the creek, noticed a peculiar rock formation. He knew nothing about mining, but he conceived the idea that in those rocks was the hidden source of the gold found in the creek.

He dug into the hill three feet and came to a nest of gold in quartz, from which he took out 1,500 pennyweights that day. Next day he dug further and found another pocket, from which he took 1,000 pennyweights of gold, making the yield of the little knoll \$2,500 in two



Nugget Found at Sam Christian Mine, Montgomery County, N. C., on Southern Railway. Weight 2 Pounds. Picture One-Half Actual Size.

days. The creek had already given up \$10,000 in less than a mile. Barringer dug down twelve feet deeper and found \$1,000 more gold, but he had got below the water level, and the water broke through from the creek and flooded his mine. Before he could repair the damage his title to the property was questioned, and litigation was begun, which, although more than a generation has

passed, is still unsettled, and the Barringer Mine remains as it was left when the water came in, with all its hidden riches intact. This was the first gold quartz vein uncovered in the United States.

The famous old mining county of Calaveras, California, has furnished some of the most noteworthy chunks of gold found in that State, but the largest have been mixed generally with quartz. A fourteen-year-old boy named Perkins was working at a plaything of a water wheel in the bed of an old worked over mountain stream in the summer of 1858, and stumbled upon a nugget of gold and quartz as large as a cocoanut. The chunk sold for about \$1,800. The strange thing about it is that the gold had probably lain where it was found among the remnants of the washings for several years, and hundreds of miners had passed that spot searching for the yellow metal.

George H. Norman and Frank Aman found near Gibsonville, in 1867, a nugget that weighed over 100 ounces and was worth \$1,700. In 1851, at French Ravine, a lump of gold and quartz together was discovered from which \$8,000 in gold was taken. In 1855 a nugget of gold and quartz found in the same ravine returned \$10,000. At Minnesota, in the same county, a nugget that weighed 266 ounces was found. This was valued at \$5,000. At French Ravine, in 1850, a mass of gold and quartz was picked up that weighed 263 ounces and was worth \$4,893.

In Placer County, in 1859, Edward Gilbert, in his

drift mine near Butcher Ranch, twelve miles from Auburn, found a nugget of gold and quartz that weighed twenty pounds. Eight pounds of this he sold for \$1,536, and the remaining twelve pounds for \$1,728, making \$3,264 for the nugget. The same man, many years later, discovered in the same mine another valuable nugget. It was 10 inches long, 3 to 7 inches wide, and over an inch thick. The gold was embedded in a mass of crystallized quartz, with clear cut corners, the sides of which shone with great brilliancy. When thoroughly cleaned it weighed 147 ounces, and it was sent to the San Francisco Mint, where it brought \$2,852. In 1864, near Michigan Bluff, a nugget of pure gold weighing 226 ounces and valued at \$4,204 was found. In July, 1876, J. B. Colgrove, of Dutch Flat, found a white quartz boulder in the Polar Star Mine which contained \$5,700 worth of gold.

Several small fortunes have come to men who picked up gold nuggets in Shasta County, California. One of the most important was found in May, 1870. Oliver Longchamp, Fred Rochon and another Frenchman drove into the old town of Shasta in search of a spot to mine. They happened to have business with A. Coleman, a dealer in hardware and notions. The three asked him where was a good place to mine. He carelessly pointed to a northerly direction and said, "Go over to Spring Creek." They took his advice, and located a claim on the creek some eight miles north of Redding. A few days afterward one of the Frenchmen picked up a nugget

valued at \$6,200. Ten years later Dent Young found a \$520 nugget on Flat Creek, near where the Frenchmen found theirs.

The biggest nugget found in California in the last thirty years was picked up in Sierra County. It was melted less than twelve years ago by a New York goldsmith, after it had been used far and wide for exhibition purposes. In August, 1869, W. A. Farish, A. Wood, J. Winstead, F. N. L. Clevering and Harry Warner were partners in the Monumental Claim, near Sierra Buttes, in Sierra County. In the last week of that month they discovered a gold nugget which weighed 1,593 ounces, troy. It was sold to R. B. Woodward, of San Francisco, who paid for it \$13,500 for exhibition purposes. When it was melted about \$9,800 was realized.

Although Plumas County, away up toward the Oregon line and near the Modoc lava bed, is one of the richest counties in California in minerals and has made a dozen men millionaires of several degrees, it has yielded few valuable nuggets. The largest was found by a Chinaman near the mouth of Nelson Creek. It was worth \$2,800. A miner in Elizabethtown, Archie Little, discovered a \$2,600 nugget, and Hays and Steadman found one above Mohawk Valley, near the county line, that weighed 420 ounces and was worth \$6,700.

Eldorado County, where gold was first found in California, yielded the first big nugget found in that State. In 1850 a 121 ounce chunk of gold was dug out with a common spade from the bank of the American River, near

Lawson's bar. It brought \$19,400. Another was found near Kelsey, in the same county, and it sold for \$4,700 in 1867. "Pilot Hill," a boulder of quartz gold, yielded \$8,000. This, with several small nuggets, was taken from the Boulder Gravel Claim, near Pilot Hill Post-office. Several large and valuable gold nuggets were discovered in Tuolumne County. In 1853 a mass of gold weighing 360 ounces was found at Columbus. This was valued at \$5,625. At Gold Hill, in the same county, a man named Virgin found one weighing 380 ounces and valued at \$6,500. A Frenchman in Spring Gulch, near Columbia, in the same county, found one of almost pure



Nugget Found at Crawford Mine, Stanley County, N. C., Near Southern Railway, April 8th, 1895. Weight 8 Pounds, 5 Ounces, Picture About Three-Fifths Actual Size.

gold which was worth \$5,000. The discovery made the miner insane on the following day, and he was sent to the Stanton Asylum. The nugget was sold and the money for it sent to his family in France. Near the

Knapp Ranch, half a mile east of Columbia, Daniel Strain discovered a large gold quartz nugget which weighed 50 pounds. After the quartz was crushed and the gold melted the profit was \$8,500. On Sullivan's Creek, in the same county, in 1854, a 28-pound nugget was picked up by one of the pioneers ; it sold for \$7,168.

What was known as the "Sailor Diggings," near Downieville, were wonderfully rich in nuggets. The claims were owned and worked by a party of English sailors in 1851. These claims produced one nugget weighing thirty-one pounds, and a number of others weighing from five to fifteen pounds. This party returned with their wealth to England, and, exhibiting their collection of nuggets and various fancy specimens in all the large towns, infected great numbers of people with the gold-hunting mania. Just at this time, April, 1851, came the world-startling news of the great gold discoveries in Australia.

Many rich pockets of gold have been found by accident. One of the richest of the pocket mines in California was that struck in the Morgan mine on Carson Hill, Calaveras County, from which \$110,000 was thrown out at one blast. The gold so held the quartz together, says a writer in *Mining Reporter*, of Denver, that it had to be cut apart with cold chisels. It is estimated that this mine yielded \$2,800,000 in the years 1850 and 1851, and new pockets have since been discovered almost yearly somewhere in the peculiar formation at and about Carson Hill.

The telluride veins of Sierra County, extending from Minnesota to the South Yuba, have been prolific of pockets. A big pocket found in the Fellows mine, on this belt, yielded \$250,000. Several other pockets yielding from \$5,000 to \$50,000 have been found in this region.

Many rich pockets have been found about Grass Valley, Nevada County; Auburn, Placer County, and Sonora, Tuolumne County. The Reese pocket, Grass Valley, contained \$40,000. This sum was pounded out in a hand-mortar in less than a month. Near Grass Valley a pocket that yielded \$60,000 was found by a sick "pilgrim," who was in search of health and knew nothing about prospecting or mining.

The Green Emigrant pocket vein, near Auburn, was found by an emigrant who had never seen a mine. It yielded \$100,000. This find was made within thirty yards of a road that had been traveled daily for twenty years. No more pay was found after the first pocket was worked.

The Deval pocket, in Sonora, alongside the main street of the town, yielded \$200,000 in 1879. It was nearly all taken out in three weeks. The "grit specimen," showing aborescent crystallization, sent to the Paris Exposition, was found in Spanish dry diggings, El Dorado County, weighed over twenty pounds and contained about \$4,000 in gold. About \$8,000 additional of the same kind of gold crystals was taken from the same pocket. The formation at this place was slate and a fine grained sandstone, filled with crystals of iron pyrites in cubes.

In American Camp, between the forks of the Stanislaus, in 1880, Le Roy Reid found a pocket in the "grass roots" from which he took out \$8,200. Near Magilla, Butte County, in 1879, a pocket paid its finder \$400 for two hours' work.

Outside of California few nuggets of note have been found in any of the Pacific Coast States and territories. Colorado's biggest nugget, known as "Tom's Baby," weighing 156 ounces, or 13 pounds troy, was taken from the Gold Flake mine on Farmcomb Hill, Summit County, Colorado, July 23d, 1877. We have been unable to get reliable information with reference to other great nuggets found in Colorado, but we learn that last January a man in Denver found a nugget worth about a dollar in the craw of a turkey gobbler. An effort to locate the ranch where the gobbler spent his happy boyhood days failed, and that placer ground, so far as known, is still to be discovered.

Montana is showing a collection of nuggets worth \$12,000 at the Paris Exposition. The biggest of them is of the size of a small paving block and weighs five pounds. It is worth \$1,050. One beautifully symmetrical specimen in the collection weighs 48 ounces, and is so pure that it is worth \$21 an ounce, or \$1,000, while there are three others that weigh from 45 to 20 ounces each. Four or five more go above ten ounces and a dozen more above two. There are thirty-eight nuggets of about an ounce each and forty of smaller size, besides a pound of dust purer than if filed from a double eagle. A handful

of sapphires and another of rubies, all Montana specimens, complete this collection.



"TOM'S BABY."

The Largest Gold Nugget Ever Found in Colorado—(156 Ounces or 13 Lbs. Troy.) Taken From Gold Flake Mine on Farmcomb Hill, Summit Co., Colorado, July 23, 1887.

Nuggets assaying \$15 an ounce, one having a value of \$29, were found this summer in Confederate Gulch,

near Diamond, Montana. The mine from which they were taken is producing the richest gold ore smelted in the State. The ore is found in narrow seams which are sometimes only a quarter of an inch wide, but are almost virgin gold.

Montana's largest nugget, however, was found by Ed. Rising at Snow Shoe Gulch, on the Little Blackfoot River. It was worth \$3,356. It was dug from 12 feet below the surface and about one foot from bedrock.

Thus far Nevada's record for big nuggets is not remarkable. The largest found in that famous mining State was taken from the Osceola placer mine about twenty years ago. It weighed 24 pounds and was valued at \$4,000. One of the laborers stole it, but, repenting of his crime two months later, returned \$2,000 in small bars to the owners—all that he had left of the glittering chunk. A nugget worth \$2,190 was found on the same property about a year ago.

Arizona, while forging to the front as a copper producer, has not been productive of famous nuggets up to this time. Last Spring Papago Indians found one worth \$900 in Horseshoe Basin, a canon in the foothills of the Quijoroa Mountains, fifty miles south of Tucson. The discovery made quite a sensation. Two hundred Indians went to work in the diggings, which is in their reservation, and many finds of smaller nuggets were reported.

On July 8, 1899, a nugget was found on Spruce Creek, Atlin Lake country, B. C., 126 feet below the surface. It weighed 84 ounces and was worth \$1,000. In

July, J. D. Harrigan took out a nugget of pure gold from his claim on Pine Creek; it weighed 29 oz. 12 dwt. 17 gr., and was worth \$600. A nugget valued at \$61 was found on Dexter Creek, near Cape Nome, this season.

On the Ortiz grant, in New Mexico, where Thomas A. Edison is trying his electrical process of extracting gold, large nuggets were found by the old Spanish gold-seekers. Several years ago a nugget worth \$1,300 was picked up after a rain-storm. Occasional pockets have been struck which have produced several hundred dollars of gold. The compiler believes the Ortiz grant to be one of the greatest deposits of gold-bearing gravel in the world. He lived on the grant during the fall and winter of 1880, investigating its mineral wealth.

The owners asked him to visit France and Germany to seek capital for its development, which he did, and in response to his efforts a distinguished German hydraulic engineer and an English mining expert were sent out to examine and report. Their findings showed, first, that at least twenty millions of dollars could be washed from the 20,000 acres of gravel; and that, to bring the waters of the Rio Grande River, distant nine miles, to the highest point on the property, an elevation of 2,500 feet, it would cost two and one-half million dollars. This in addition to the cost of the property meant a large investment, but it was agreed to, providing Count Ferdinand de Lesseps, of Suez and Panama Canal fame, would approve of the hydraulic feature. The compiler spent two days at Count de Lesseps' home, in Paris. The Count approved of the

German engineer's plans, and but for the litigation which unfortunately arose at that time over the titles and continued for years, the Europeans would have developed this great property. Now Edison is endeavoring to do by electricity what the anticipated owners desired to do by water. And the compiler hopes he will succeed, for the great value of this property has been proven by international experts.

J. Kilgour found a nugget weighing 52 oz. 11 dwt, 6 gr. on the north branch of the Gilbert River, a tributary of the Chaudiere River, Beance County, Province of Quebec, in 1866. Another valued at \$821.56 was found in the same district in 1867 by Arch. MacDonald.

The big nugget of pure gold on exhibition in this city is the largest found in fifteen or twenty years. It came from the San Mateo Mountains of Chihuahua, Mexico, and is the property of a Connecticut company of placer miners operating in Mexico. It weighs 468 ounces and is intrinsically worth about \$8,430. The poor Mexican peon, who found this chunk of gold while he was gathering medicinal herbs on the mining company's territory, was given \$1,000 for his lucky discovery.

We have been unable to get any reliable information with reference to gold nuggets found in Mexico, Central and South America. Through the courtesy of Dr. Raymond we have been informed of one nugget found at La Paz, Peru, in 1730, weighing 60 pounds. But there has in all probability been a greater number of nuggets found in South America during the past 300 years than in any

other part of the globe. The South American countries have been extremely rich in gold placer mining. From the earliest records to date they have produced two and one-fifth billions of gold, being nearly one-third of the world's supply; and for the same period their production of silver reached the enormous total of about eight thousand million dollars. The gold mined was distributed as follows:

Columbia	has produced about.....	\$800,000,000	gold.
Bolivia	“ “ “	200,000,000	“
Brazil	“ “ “	800,000,000	”
Peru	“ “ “	100,000,000	“
Chile	“ “ “	25,000,000	“
Mexico	“ “ “	225,000,000	“
Other South American countries.....		50,000,000	“

Official data in Mexico shows that one mine at Guana-juato, the Vita Madre, has produced to date silver bullion valued at over one thousand million dollars.

An American named George Cameron, of Cleveland, O., was highly favored in the discovery of five nuggets at Pilgrim's Rest, South Africa, where gold was first found in 1875. In addition to several four-pound chunks, Mr. Cameron washed up one that weighed over seven pounds. This nugget was shaped like the human hand, fingers and all. It was on exhibition at the Centennial in Philadelphia in 1876. On Frazier's Hill, in the same camp, nuggets weighing from two to three pounds were found. Upper Pilgrim's Creek was also a Tom Tiddler's ground. It gave up nuggets running from four to five pounds,

which were bought by the National Bank of Natal for \$19.50 per ounce.

Siberia, which now commands additional interest owing to its proximity to Alaska, and from the fact that a large corporation is prospecting its shores for gold, must not be omitted from the general record. The greatest nugget found in this Russian possession was the "Ural," found in the Ural Mountains, which was worth \$24,000. Another large nugget, named the "Tzar," was found in the Tzar Alexander mine district on July 22, 1882. It was valued at \$11,000. Another nugget, which yielded \$30,000, was found by three convicts. The Czar freed the convicts, but kept the gold. It is interesting in this connection to note that Russia ranks fourth among the gold-producing countries of the world. The *New York Sun*, under date of August 30, 1900, says that a nugget weighing 1,150 ounces was found recently in the Ural gold mines at Orsk, in the Government of Orenberg.

Now that the Japanese Government has sanctioned the operation of mines by foreigners the islands will soon figure as gold producers. In Hokkaido, the northernmost main island of the empire, the total length of the river beds containing gold is estimated at 3,500 miles, and the total productive area at 1,750,000 acres. Nuggets weighing over half a pound have been found in the district.

The gold mines of Sado, the most important producers in Japan, are situated in the northwestern portion of the Island of Sado, in the Sea of Japan, fifty miles north of

Niigata. There is no official record of the output of the mines for the whole time during which they have been worked, but they are said to have turned out in 276 years 1,230,348 ounces of gold and 62,078,216 ounces of silver. From the first year of Meiji to March, 1889, a period of twenty-one years and three months, the total



Nugget Found by a Shepherd Near the Village of L'Ardeche, France.

output was 51,494 ounces of gold and 1,500,106 ounces of silver. The total production of Japan in 1890 was 23,401 ounces of gold, and in 1897, 34,500 ounces; 40,000 ounces for 1898, and 66,000 ounces for 1899.

We are indebted to Stanislas Meunier, a mining engineer of Paris, for information with reference to a nugget

weighing between one and two pounds (see illustration) found by a shepherd while grazing his goats at a place near the village of L'Ardeche. He picked up what was supposed to be a stone to throw at wayward goats. He threw the stone, and his brother finding it next day, attracted by the color and weight, took it to the local jeweler for examination, who gave him 1,200 francs for it. The village priest relates that for a period covering sixty years nuggets much smaller in size have frequently been found in that locality. One weighing 543 grammes was dug up by a farmer while hoeing, about thirty years ago.

Often nuggets of peculiar shape are found. Last fall a priest named Father Long found one formed like a sickle and weighing 100 pounds in West Australia. He called it the "Sacred and Golden Sickle," as it had been found as the result of a vision that came to a poor but devout parishioner. It was dug up by the priest, guided by the parishioner, from a depth of six feet, on the Kurnalpa road, a quarter of a mile from the nearest lake.

L. W. Tatum, of the Providencia Mining and Milling Company, Dolores, Mexico, bought from an Indian a small nugget which was a perfect corn husk in shape. The jeweler who mounted it for a scarfpin said the graver's art could not improve it. The centre stem of the husk ran from butt to tip, gradually tapering; the side or lateral veins were all clear and perfect, and the entire shape of the leaf appeared. The nugget was one and a half inches long and three-eighths of an inch wide. It was 19 carat fine and a beautiful color. The whereabouts

of this unique specimen is unknown. It was stolen from Mr. Tatum's cravat several years ago while he was riding in a smoking car between St. Joseph, Mo., and Omaha.

The Indicator vein in the Ballarat group is as remarkable in formation as it is unrivalled as a gold producer. It has often shown a matrix of wholly precious metal, the silica being displaced by entire gold, no vestige of the gangue initial matter being left. A pendant of pure gold in egg-sized lumps, united by a thin, wirelike chain of about four feet long, and of the value of \$7,500, was taken thirty years ago from a depth of 250 feet on the Indicator lode. What are called "bunches" of gold are frequent, and it is difficult to tell where they take their departure.

III.

No part of the world has been so prolific in the yield of nuggets as Victoria. Of many discovered in the early days no record has been preserved, but prior to 1869 a list of finds was compiled by William Birkmyre, an Australian assayer of high standing. Among the most valuable finds recorded is that of the "Welcome Stranger," which occurred about a mile west of the village of Molia-gul in the neighborhood of Dunolly on February 15, 1869. This world-famed nugget was found by two puddlers, John Deason and Richard Oates, on the extreme margin of a patch of auriferous alluvium, within two feet of the bed rock (sandstone), in a loose, gravelly loam. It rested on stiff red clay and was barely covered with earth; in fact, it was in the rut made by the puddlers' cart that the treasure was noticed. It measured about 21 inches in length and 10 inches in thickness, and though mixed with quartz, the great body of the "Welcome Stranger" was in solid gold.

The lucky finders conveyed it to their hut and heated it in the fire, in order to get rid of the adherent quartz, and thus reduce its weight before taking it to the bank at Dunolly. They also detached and gave to their friends a number of specimens and pieces of gold before the nugget got into the hands of the bank manager. The melted

gold weighed 2268 oz. 10 dwt. 14 gr. and contained only 1-75th of alloy, which was composed chiefly of silver and iron, so that 98.66 per cent. of the nugget was pure gold. Including the pieces given away to their friends by the finders the nugget yielded 2280 oz., equivalent to 2248 oz. of pure gold, its value at the Bank of England being \$47,670. The neighborhood of Dunolly was at that time almost unprospected country. Very heavy gold was characteristic of the locality, many large nuggets being found there; and, near the spot where the "Welcome Stranger" was discovered, two nuggets of 114 oz. and 36 oz., respectively, were unearthed soon afterwards.

The Welcome nugget, found by a party of 24 at Bakery Hill, Ballarat, on June 15th, 1858, was sold by the discoverers in Ballarat for \$52,500, and, after being exhibited for a season in Melbourne, was again disposed of for \$46,625. It then weighed 2159 oz., so that the price obtained was \$21 per ounce. This nugget was found at a depth of 180 feet. It was apparently waterworn, contained about 10 lb. of quartz, clay, and oxide of iron, and measured 20 inches in length, 12 inches in breadth, and 7 inches in depth. The Welcome was melted in London in November, 1859, and contained 99.20 per cent. of pure gold. Two other large nuggets, one weighing 480 oz. and the other 571 oz., were unearthed in the immediate vicinity three years before.

The Blanche Barkley nugget (1743 oz. 13 dwt.), of the value of \$34,525, was found by a party of four at Kinnower, at a depth of 13 feet, and within 5 feet or 6 feet of

holes that were dug three years before. Previous to its being melted the nugget was exhibited in Melbourne and at the Crystal Palace, London, where it was an object of great interest owing to its bulk, brightness, and solidity; and for some time the fortunate owners netted an average of \$250 per week. On assay it yielded 95.58 per cent. of pure gold.

Another party of four found in the Canadian Gully, Ballarat, at a depth of 60 feet, a nugget weighing 1619 oz., just after unearthing a nugget of 76 oz. Two of the party had been in the colony not more than 3 months, when they returned to England with their prize, which yielded them \$27,660. Near the same gully, on September 8th, 1854, a nugget of gold weighing 1177 oz. 17 dwt. was found, and from the same hole upwards of 220 lb. of smaller nuggets were obtained, so that the value of gold taken from this claim was not less than \$65,000. A nugget only 8 dwt. lighter than the last-named (which was known as the Lady Hotham) was discovered in Canadian Gully, Ballarat, at a depth of 60 feet, amongst quartz boulders and washdirt going an ounce to the ton. At the first blow of the pick the miner suspected he had struck gold; at the second stroke the pick stuck in the nugget. Two days afterwards, in the same claim and drive, and within 10 feet of the spot where the 1619 oz. nugget was unearthed, a nugget weighing 1011 oz. 15 dwt. was discovered. It was somewhat of the shape of a pyramid, a very fine specimen with snowy white quartz attached. The two working diggers continued operations a fort-

night longer for a yield of 100 oz. of small gold, and then sold their claim for eighty guineas!

The Heron nugget, found by two young men near Old Golden Point, Fryer's Creek, Mount Alexander, was a solid lump of gold, which drew the scale at 1008 oz. and realized \$20,400. The lucky finders had been only three months in the colony. Nuggets of 7 lb. and 22 lb. respectively were obtained in the same locality some three years before.

At Kingower, where the Blanche Barkley was brought to light, two men came upon a nugget of 805 oz. within a foot of the surface, and the following year another nugget, weighing 782 oz., was found in the same locality. A party of three divided \$15,000 as the proceeds of working a claim at Back Creek, Taradale, to a depth of 12 feet, their yield including a nugget of 648 oz. and a number of small nuggets weighing 80 oz. In an abandoned hole at Eureka, Ballarat, a 625 oz. nugget was found in 1854, and at McIvor, in 1855 and 1858, two nuggets, weighing 645 oz. and 658 oz. respectively, were unearthed in shallow workings. A 600 oz. nugget, of the value of \$10,900, was found at Yandoit, Castlemain, in April, 1860; and, within six weeks, five more nuggets were discovered in the same locality. At Laskman's Lead, Maryborough, in June, 1855, a nugget weighing 1034 oz. 5 dwt., and sold for \$16,250, was found at a depth of only 5 feet from the surface. In an old pillar of earth in a deserted claim at Robinson Crusoe Gully, Sandhurst, a nugget drawing the scale at 377 oz. 6 dwt. was discovered.

The Victorian nugget, found in the White Horse Gully, Sandhurst, in 1852, weighed 340 oz., and was bought by Parliament, at a cost of \$8,250, for presentation to the Queen. Close to the same spot, lying amongst gravel about a foot from the surface, the Dascombe nugget was found in January, 1852. It weighed 332 oz., and was sold in London for \$7,500. At Mount Blackwood, in 1855, a nugget of 240 oz. 18 dwt. was found lying on the surface of the ground; and in May, 1860, a moss-covered nugget, weighing 230 oz., was picked up by a prospecting party at Kingower, where, eight months later, another nugget of 236 oz. was discovered within half an inch of the surface. At the same place, in September, 1858, a boy dug up a nugget weighing 120 oz. from a depth of a few inches. At Ballarat, in August, 1860, at a depth of 400 feet, a solid lump of gold weighing 834 oz. was unearthed, and with it 100 oz. of smaller gold.

In March, 1869, a nugget weighing 893 oz. was found at Berlin, where in May and October of the same year the Viscount and Viscountess Canterbury, weighing 1105 oz. and 884 oz. respectively, were discovered near the surface. During the year 1870 several large nuggets were found, the principal of which were—one on May 31st, at Berlin, weighing 1121 oz., another at the same place on October 3d, weighing 896 oz., and a third on November 11th, at McIntyre diggings, only a few inches from the surface, weighing 452 oz. During the year 1871, also, large nuggets were found at Berlin. Amongst the largest were the Precious, found on January 5th, weight 1621 oz.; the

Kum Tow, April 17th, 718 oz.; and the Needful, May 10th, 247 oz. These three nuggets were discovered at a depth of about 12 feet from the surface. A large number of nuggets have been found on other goldfields, varying in weight from 20 oz. to 200 oz.

In the year 1872 the undermentioned large nuggets were discovered: On April 2d the Crescent was found at



**Nugget Found at Reed Mine, Cabarrus Co., N. C., Near Southern Railway
April 10th, 1896. Weight 22 Pounds. Picture One-Eighth Actual Size.**

Berlin, at a depth of 2 feet; it weighed 14 lb. 11 oz. On May 8th a nugget weighing 477 oz. was got in the same locality, at a depth of 9 feet. At Dunolly the Schlemm nugget was found, weighing 478 oz., at a depth of 3 feet from the surface. The Spondulix nugget, found in a quartz reef at the same place, at a depth of 8 feet from the surface, weighed 130 oz. Among other big nuggets since discovered are the Baron Rothschild, 90 oz., at Cres-

wick, in 1884; the Lady Loch, 617 oz., in the Midas mine, Creswick, in September, 1887; the Lady Brassey, from the same claim; and in 1889, a 461 oz. nugget, found at Ironbark, in a small pillar of ground between two old holes; one 54 oz. at Bokewood; and another 48 oz. at Pinchgut Gully, Ballarat. Within the fortnight ending May 7th, 1898, three nuggets were found, one weighing 127 oz., at Blue Gully, foot of the Blue Mountains, in the Trentham district; one weighing 142 oz. at Blackwood; and one weighing 138 oz. at the Break o'Day claim, Rokewood. These finds, which bring the record down to date, go to prove that despite the finds of former years the golden store is still unexhausted.

Other important finds may be summarized as follows: At the Twisted Gum-tree (date not given), a nugget weighing 408 oz.; in Canadian Gully, Ballarat, in 1853, a nugget of 371 oz. 2 dwt., containing a good deal of quartz; sold in Melbourne in March of the same year for \$7,327. In the same gully, February, 1853, two nuggets, 368 oz. and 143 oz. 15 dwt. respectively; at McIvor, 1857, a 328 oz. nugget, with smaller ones weighing 35½ oz.; at McCallum's Creek (no date named), 326 oz. 10 dwt.; at McIntyre diggings, near Kingower, March, 1857, 810 oz. At Kingower, February, 1861, 782 oz.; at Daisy Hill, October, 1855, only 3½ feet from the surface, 715 oz.; at White Horse Gully, Sandhust, October, 1852, in the same hole as the nugget presented to the Queen, one weighing 573 oz., and valued at \$10,500; near Native Youth, Ballarat, at a depth of 9 feet, the Nil Desperandum, November,

1857, 540 oz.; at Blackman's Lead, Maryborough, January, 1858, 6 feet below the surface, 537 oz. 5 dwt.; at Yandoit, Castlemaine, October, 1860, at a depth of 16 feet, 384 oz.; at Sandhust, in 1854, 338 oz. 18 dwt.; at the McIntyre diggings, September, 1858, 6 feet below the surface, 300 oz.; at Kingower, in 1854, 282 oz. 2 dwt.; in April, 1861, 281½ oz.; and in August, 1861, in shallow sinking, 300 oz.; at Sandhurst, in 1852, 288 oz.; at Jones's Creek, 1856, 281 oz.; at Daisy Hill, the same year, 275 oz. 3 dwt. 18 gr.; at Golden Point, Fryer's Creek, (no date given), 264 oz.; at Brown's diggings, October 23, 1856, 263 oz. 8 dwt.; at Kingower, May, 1856, within four feet of the surface, 260 oz.; at Mount Korong, May, 1856, at a depth of 18 inches, 235 oz. 13 dwt. valued at \$5,000; at Yandoit, 1860, within 20 feet of the surface, 240 oz.; at White Hills, Maryborough, 1856, at a depth of 12 feet, 236 oz.; at Mount Korong, August, 1854, 192 oz.; at Bryant's Ranges, 12 miles from Castlemaine, in 1854, 183 oz. 8 dwt. 12 gr.; at Tarrangower, May, 1855, 180 oz.; at Maryborough, 1854, 178 oz. 16 dwt.; at Evans' Gully, 1861, 153½ oz.; at Jones Creek, Mount Moliagul, 1855, one of 145 oz. 5 dwt. and another 140 oz.; at Creswick Creek, May, 1860, 144 oz.; at Jim Crow, September, 1858, 136 oz.; at Mount Korong, 4½ feet from the surface, 132 oz. 9 dwt.; at Dunolly, 1854, 110 oz. 9 dwt.; at Kingower, September, 1861, 106 oz. 16 dwt. and 100½ oz.; at Mount Moliagul, November, 1857, 104 oz. 8 dwt., valued at \$2,000.

The largest gold nugget of which the world has any

knowledge was found at Hill End, New South Wales, by Messrs. Byer and Haltman. It measured 4 feet 9 inches in length, 3 feet 3 inches in width, and averaged 4 inches in thickness. It sold for \$148,000. At the time of finding it Messrs. Byer and Haltman had exhausted their capital and were practically living on charity. It is said that the discovery so unnerved one of the partners that he was unfit for work or business for a long period.

IV.

With the discovery of some famous nuggets are associated stories tinged with romance, pathos and cupidity. In 1852 a chunk of gold weighing 45 pounds and worth \$8,000 was found near Sonora, Tuolumne county, California. The finder had a friend, relates S. M. Frazier in *Mining Reporter* of Denver, who was far gone in consumption, but who was trying to work in the mines. The owner of the nugget saw that the man was fast killing himself. At that time such a mass of gold was a curiosity which people would flock to see, and he arranged with his sick friend, who was well educated, to take the nugget to the States for exhibition purposes. Besides the mass of solid gold, he took some fine dust, chispas, gold-bearing quartz, black sand, gravel and auriferous dirt from the placer, and delivered lectures on mining operations in California. The agreement between them was that whenever the owner wanted the nugget or its value he was to let his friend know of his need.

For a time the miner heard from his friend regularly, then all at once lost track of him. He began after months to think his nugget lost—that his friend had been murdered and robbed in some out-of-the-way place. One day, however, a letter reached the miner from a banker in New Orleans, telling him that his friend had died in

that city, but had left the big nugget at the bank subject to his order. The miner wrote to have the nugget melted down, and in due time he received a check for a little over \$8,000.

A story of a different kind is told by the same writer. In a drift mine at Remington Hill, Nevada county, in 1856, the half of a smoothly washed boulder of gold quartz was found which yielded \$4,672.50. The nugget was smooth on all the rounded sides, but had on one side a flat, rough face. At the time the chunk was found it was remarked that the other half of the boulder might possibly be somewhere in the same claim. In 1858, two years after the first find, the owners of the mine had a hired man who was engaged in drifting out pay dirt. One day this man unexpectedly announced that he was going to leave—that he was going down to Nevada City to try his luck for a time.

The man was paid his wages and, shouldering his blankets, he took his departure. After he had been gone a short time one of the partners said: "It is strange that the fellow should all at once quit work here, where he had a steady job at as good wages as he can find anywhere in the country. I wonder if he has not found the other half of that boulder?"

"Well, what are you going to do about it?"

"I am going to mount a horse and follow him. I am confident that I shall find that chunk of gold in his possession, and I will make him surrender it with very little ceremony."

"So! All right; you may have my half of all you realize from the venture. But remember, if you fail, you will place yourself in a very unenviable light in the eyes of an honorable man by reason of an unjust suspicion. I imagine I see you coming back tired, crestfallen and the barometer of self-respect fallen several points."

Mounting his horse, the man who had "suspicions" took the road to Nevada City with a six-shooter in his belt.

When he overtook his man and asked him to throw down and open out his roll of blankets, the fellow was at first quite indignant and inclined to be ugly, but when he saw a revolver pointed at his head he cried out:

"I cave. Now, how in creation did you find out that I'd got hold of the other half of that nugget?"

"Guessed it," said the mine owner. "Shell her out."

Down went the blanket and out came a big golden nugget. Sure enough, it was the other half of the boulder. Taking the chunk, the owner told the man to "git;" that as he had met with a great temptation he was forgiven. The half thus received produced \$4,430.75, making a total for the whole boulder of \$9,103.25.

The unsuspecting partner was very sick when he saw the missing half of the boulder brought back. However, the other, after paying himself \$1,000 for his trouble and his ability as a detective, divided the remainder with the man who had laughed at him in the start. He said he took only \$20 for his trouble and risk, but that for his "sabe" he must have \$980.

There is an exciting story connected with the finding of the Oliver Martin nugget, the largest ever found in California, which sold for \$22,700, after it had earned \$10,000 from exhibition in various parts of the country. Although a young man, Oliver Martin was little better than a tramp. He spent his time in doing odd jobs and drinking whiskey around the mining camps of Yuba, Tuolumne, El Dorado and Calaveras counties. He didn't even own a pan, much less a rocker or long tom. One of his boon companions was John Fowler, who was equally shiftless and dissipated.

One night in November, 1854, the two were on their way from Benton's bar over the Grizzly Mountains to Camp Corona, the spot made famous in literature by Bret Harte. The fall rains had begun, and the streams were running high. On the night of the 17th, almost stupid with drink, the two sought refuge in a deserted miner's hut. During the night a heavy rain, peculiar to the mountain ranges, set in. The water fell in torrents, and came pouring down the precipitous mountain sides. The narrow canon where Martin and Fowler lay asleep and drunk was soon filled with the rushing waters, which threatened to sweep away the old shack of a building. They were awakened by the water pouring into the cabin, and sought to escape by climbing the steep sides of the canon. Both men were swept back into the flood and were carried down the stream in the darkness. Martin was washed into a clump of live oaks, and managed to

lodge, clinging to the branches until morning, but Fowler was drowned.

Next day, November 18th. toward noon, when the waters had subsided, Martin secured a pick and shovel, and started to bury his dead companion. He selected a sandy spot at the base of the cliff, and had not dug down two feet when he came upon the nugget. He made several tests before he could convince himself that it was really gold. The chunk was bigger than a bull's head, and too heavy for Martin to carry. He hurried to Camp Corona to secure help. He had some difficulty in persuading anyone to go with him. At last a miner consented, but carefully made the statement that he was going to help bury Fowler, and not to carry nuggets, as he, like others in the camp, placed no confidence in Martin's story. The chunk weighed eighty pounds and required the combined efforts of Oliver and his assistant to get it to the camp.

Before starting both men staked claims, Martin, of course, claiming his where he had unearthed the big nugget. As soon as the news of the great find spread, miners flocked in by hundreds, but although the stream was carefully prospected for miles, nothing of any great value was found. Martin considered that his find and the peculiar circumstances attending it was an act of Providence, and he never touched intoxicants thereafter. With the money he got from the sale of his nugget he went to mining in a business-like manner. Later he was attracted to Yucatan, where he made over half a million in

quartz mining. He died in New Orleans a few years ago, leaving a fortune of over a million dollars.

To a poor half-breed Indian belongs the credit of the second largest find in California. The scene of this discovery was a spot that had been gone over time and again by experienced prospectors and miners. In 1861 a firm of young men from St. Louis had been induced to invest in a big placer claim in Nevada county. Old miners laughed in their sleeves when they heard of the deal. The claim had never yielded more than "colors" and "promises," and they regarded it as a moribund proposition.

But the new firm took hold with all the energy of young blood and abiding faith in their judgment and fortune. Sluices were built and the hunt for gold instituted with great vigor. Among the employes was the young half-breed Indian. One evening when the men had gone to their tents for supper, he went down to the creek to wash his overalls. The sluice and creek were so dirty that he could not see clearly beneath the surface. After spreading his overalls on the sluice boards to dry, the Indian's eyes were attracted by a big yellow rock in the muddy stream. He got down into the water and rolled the rock over several times. He had never seen gold in any other form than tiny flakes or bits the size of pin heads, and it never occurred to him that gold could be found in any such mass as that he was rolling in the stream. He concluded that he had discovered

some new kind of rock and went to his tent to sleep in peace.

Next morning when he returned for his overalls he examined the curious rock again. There was something about it he could neither understand nor define, and he called the foreman to inspect it. The trained eye of the experienced miner at once recognized the precious nugget, and the camp went crazy over the find. As the story spread, hundreds came long distances just to feast their eyes on the lump of gold and to poise it in their hands. It weighed 65 pounds and filled a peck measure. The firm sold the nugget to the Adams Express Company for \$17,400, and presented each of their employes in the camp \$100, giving the half-breed \$300 extra for his luck in making the find. The claim was afterwards worked over carefully, but while it yielded a moderate amount of dust, no other nugget larger than a pea was found, which is another proof of the miner's axiom that "gold is where you find it."

Nuggets have sometimes been found in out-of-the-way places where there is not another particle of gold within miles. Only a few years ago a consumptive who had sought refuge in the mountains back of San Diego, found a nugget that was as much a surprise to himself as to the prospectors of that section. In one of his long walks for health and exercise he amused himself by looking for Indian relics in a canon after a long, reavy rain-fall had washed down great masses of gravel and earth into the canon. In picking his way alongside the cliff,

he stumbled over the nugget. He took it to San Diego and received \$1,580 for it, which was about five times what he thought it was worth. Old prospectors went over the ground where the nugget was found and all over the neighborhood, but no one found as much as a color.

A similar find was that made by a miner known to all old-timers as Dan Hill. Hill was equally famed as a finder of nuggets and as a drinker of whiskey; in fact, it is a question which gave him the wider reputation. One day he and some companions were camped in a lonely canon near Dutch Flats, in Nevada county. Hill amused himself by running over gravel on an abandoned placer claim. Tiring of this he went down to the brook to wash his hands. There in the running water, staring him full in the face, lay a nugget of gold and white quartz as big as his head. How it had lain there so exposed to the possible view of hundreds of miners who had tramped over that country and hunted the stream from end to end, time and time again, was the favorite topic of speculation among miners for months after.

Hill sold his nugget for \$12,300, and went on a spree that lasted into the second year. He had made a name for himself as a big nugget finder some four years previously; he was eking out a bare existence in the placers near Ruby Belle Camp, in Plumas county, and almost within the shadow of Mount Shasta, when one day he dug out of the gravel a chunk of gold. Hill started at once for the nearest point where he could turn it into cash, and the D. O. Mills Bank in Sacramento handed

him \$9,000 for it. Of this he spent \$5,000 in San Francisco in one week, and was soon as poor as ever, and again on the hunt for nuggets. But his luck had departed. He never made another find, and died in the almshouse at Los Angeles several years later.

Colored miners were proverbially lucky in the early days of placer mining in California. In 1868 one of them was out on a prospecting tour on the slope of Table Mountain, Tuolumne county. Just where the mountain drifts down towards Shaw's Flat, he saw the corner of a big nugget sticking out of the ground. He dug it out, planted it in a new place and marked the spot, and continued on his prospecting expedition. He did not stake out a claim where he found the nugget, as he believed it to have rolled down from some point higher up the mountain.

Finding good pay at the place he went to prospect he remained several weeks, feeling quite at ease in regard to the big nugget he had cached.

Finally he quit work in his new diggings and set out to relocate the place where he had hidden his big nugget. On coming in sight of the spot where he had buried it he almost dropped in his tracks, for he saw a company of men at work just where he had made his "plant." The men were Italians, and they had worked up to within ten feet of the spot where lay buried the big nugget. The colored miner explained the situation to the Italians, and they permitted him to dig up and carry away his nugget. If there is such a thing as

double luck, this colored miner was endowed with it, for the rescue was about as fortunate as the find. The nugget weighed 35 pounds and yielded over \$7,000.

Two years ago a man was literally "kicked" into a fortune. Louis Roderigo was discharged by the superintendent of the Mistle Shaft Mine. Every day for weeks he hung around the mine imploring to be taken back. Finally he was kicked off the grounds. He procured a pick and shovel and grub enough to last him for a week or two, and started off prospecting in Bear Creek on the Pine Ridge, some 75 miles northeast of Fresno. Three weeks later he returned with \$9,000 in gold dust, which was panned out in less than a fortnight's actual work.

Among the mining exhibits in the mining department at the World's Fair at Chicago was a nugget of pure gold, found in Alpine county by a young woman. The history of the discovery of this chunk is cherished by every woman in the gold mining regions in California. Harry E. Ellis and his wife went to the State in 1874 from Philadelphia because of Ellis' serious lung trouble. They went to live up in the mountains of Alpine county, miles from any neighbor. They got their livelihood by hunting and cultivating a few acres of land about their lonely cabin. Grizzled old gold miners with their jackasses laden with grimy camp outfits and blankets, came by the Ellis cabin frequently. One of the men lay ill there for several weeks, while he was nursed to health and vigor by the Ellises. The miner told them how they

might find recreation and profit in hunting through the canyons and foothills in that region for "pay dirt," and showed them where he believed there were indications of gold-bearing gravel.

For days at a time the young husband and wife tramped up and down the gulches in Alpine county, looking for specks of gold, but all without avail. They abandoned seeking riches in the placers, and confined their attention to their little ranch. One afternoon as Mrs. Ellis was driving home the family cow she was seeking stones to throw for the amusement of the dog. She saw in the coarse gravel a dark, dull yellow stone and picked it up.

"I knew from the moment I picked it up," says she, "that I had found gold, because it was so heavy, but as I had never seen a real nugget I was afraid my husband would laugh at me."

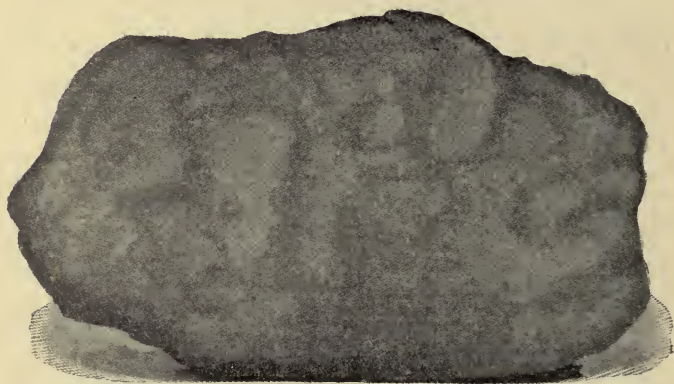
The nugget has never been utilized in gold working and is still kept for exhibition purposes. It is phenomenally clear and the size of a croquet ball, but very rough and battered by rolling and tumbling in water for ages. Mrs. Ellis got \$2,250 for this find.

Such is life and luck among the gold hunters of the world.

V.

There has been a wide discussion as to the origin of gold nuggets. One of the most acceptable theories was formulated by Alfred R. C. Selwyn, a former Victorian government geologist. Mr. Selwyn believes that nuggets have been formed through the deposition of metallic gold (analogous to electro-plating) from the meteoric waters which circulate through the drifts, and which must have been, during the time of the extensive basaltic eruptions, of a thermal and probably highly saline character, favorable to their carrying gold in solution. That nuggets in general are almost free from impurities is an argument against their origin in common with small particles of gold in quartz veins; and, again, it is noteworthy that large pieces of gold are not usually found in veins. Much stress is laid on the fact that nuggets are sometimes found at a considerable distance from a quartz ledge; but it has not probably been considered that the ledge from whence the mass was derived may have been completely carried away, and that the origin of the gold may not have been in what is now the nearest ledge. Floating masses of quartz—such as are found at Inglewood—may have contained many nuggets, and where the gold they contained was set free the miner would look in vain for the ledge. The conditions under

which a mass of gold might be moved to a great distance when embedded in a rock of low specific gravity have also to be considered. Many mineralogists say that the purity of alluvial gold is the result of exposure for long periods to the action of water and atmospheric air, whereby the silver, copper, iron, etc., with which the gold in the veins is alloyed, have been decomposed and removed; and, as large pieces of gold have been found in



Nugget Found at Crawford Mine, Stanley Co., N. C., on Southern Railway,
August 22nd, 1895. Weight 10 Pounds. Picture
About Three-Fifths Actual Size.

quartz veins, and nearly all large nuggets have had quartz adhering to or intermixed with them, it is argued that nuggets have been formed in the veins in the same way, and probably at the same time, as the smaller pieces of gold. That as many large pieces of gold have not been found in the veins as in the alluviums is just what

might have been expected. Every superficial foot of auriferous drifts represents many thousand feet vertical of veins; and, until the existing veins have been completely explored, and ground down and worked to a depth equal to that operated on by the denuding forces of nature during past ages, it cannot be said whether or not the proportion of nuggets found in the alluviums is in excess. The Welcome Stranger, the largest nugget ever known, had obviously been embedded in quartz. The hundredweight of gold discovered on Dr. Kerr's station, in New South Wales, was taken from a vein which cropped out on the surface. "The largest of the blocks." we are told, "was about a foot in diameter, and weighed 75 pounds gross. Out of this piece, 60 pounds of pure gold was taken. Before separation it was beautifully encased in quartz." Every nugget, whether large or small, which has not presented indications of being very much worn, has borne with it proofs that it had been broken out of a vein. The most careless examination of any large piece of gold would satisfy the observer that it had not been formed differently from smaller pieces; but whatever is uncommon is, of course, generally marvelous.

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From one of the deep leads in Avoca, a large, smooth boulder of quartz containing a piece of gold which, detached from the quartz, would form a nugget of considerable size, was obtained. The gold was firmly embedded in the quartz, and has taken the rounded form so completely as to present, in fact, almost an even surface. It

is probable that the mass, when detached from the reef, was caught in some hole in the rock, and was gradually shaped by attrition in that spot, and not moved violently in the bed of the stream, where it would have been broken and set free the gold. Many remarkable granitic pebbles, as large as cannon balls, and formed in this manner, are preserved in the local museum at Beechworth. More weight might be attached to the theory that nuggets have been formed in alluviums and Tertiary strata through the deposition of metallic gold from the meteoric waters which circulate through the drifts if these masses of gold were found only in deep leads; but large nuggets have been found protruding from the soil, or buried only a few inches, and lying on the bedrock in most recent gravels, and it is a significant fact that the goldfields most remote from the basaltic areas have been the richest in large nuggets.

VI.

Our readers will doubtless be interested in the following tables, which give the gold and silver production of the world for the years 1896, 1897, 1898, 1899:—

UNITED STATES.

State or Territory.	1896. Value. (a)	1897. Value. (a)	1898. Value. (a)	1899. Value. (a)
Alaska.....	\$2,055,700	\$2,700,000	\$2,820,000	\$5,125,000
Arizona.....	2,579,000	2,700,000	2,400,000	2,575,000
California.....	15,235,900	15,000,000	15,300,000	14,800,000
Colorado.....	14,867,971	19,579,637	23,534,531	26,508,675
Idaho.....	2,155,300	2,000,000	2,050,000	1,750,000
Michigan.....	37,200	(c)	(c)	(c)
Montana.....	4,324,700	4,496,431	5,274,913	4,819,157
Nevada.....	2,410,538	3,000,000	3,000,000	2,371,882
New Mexico.....	475,800	470,000	480,000	500,000
Oregon.....	1,226,000	1,354,593	1,216,669	1,275,000
South Dakota.....	4,919,000	5,300,000	5,720,000	5,800,000
Southern States (b)	264,300	249,737	263,153	500,000
Utah.....	1,899,900	1,845,938	2,372,442	3,506,582
Washington.....	405,700	449,664	600,000	750,000
Other States.....	20,200	64,795	77,722	44,725

Total domestic.	\$52,886,209	\$59,210,795	\$65,082,430	\$70,096,021
Foreign.....	8,461,023	12,091,599	22,024,690	29,422,691

(a) 1 oz. gold equals \$20.67; (b) South Carolina, North Carolina, Georgia and Alabama. (c) Included with other States.

GOLD PRODUCTION OF THE WORLD.

Countries.	1897.	1898.	1899.
America, North—			
United States.....	\$59,210,786	\$65,082,430	\$70,096,021
Canada.....	6,027,016	13,700,000	21,049,730
Newfoundland.....	62,010	62,010	62,010
Mexico.....	67,121,189	8,236,720	9,277,351
Central America.....	525,000	505,096	485,158
America, South—			
Argentina.....	137,700	137,700	137,700
Bolivia.....	343,500	343,500	343,500
Brazil.....	1,462,120	1,583,700	1,583,700
Chile (b).....	1,407,623	1,240,000	1,129,820
Columbia.....	3,900,000	3,700,000	3,400,000
Equador.....	132,900	39,500	39,500
Guiana (British).....	2,008,098	2,048,297	2,238,040
Guiana (Dutch).....	681,784	568,898	557,532
Guiana (French).....	1,237,310	1,644,260	1,605,088
Peru.....	465,220	652,593	657,905

Uruguay.....	38,506	38,506	38,506
Venezuela.....	1,057,379	996,900	963,670
Europe—			
Austria.....	44,927	47,520	47,520
Hungary.....	2,038,993	1,839,506	1,839,506
France.....	183,430	177,448	177,448
Germany	240,890	73,771	73,771
Italy.....	213,014	124,878	124,878
Norway.....	665	665	665
Portugal.....	11,098	11,098	11,098
Russia.....	21,538,490	24,734,418	23,963,017
Spain.....	37,888	39,873	39,873
Sweden.....	75,299	83,672	83,672
Turkey.....	7,975	7,751	7,751
United Kingdom.....	34,962	36,321	10,000
Africa—			
So. African Republic.....	56,718,679	78,070,761	72,961,501
Rhodesia.....	Nil	433,682	1,121,170
Soudan.....	55,830	55,830	55,830
West Coast.....	400,000	65,110	65,110
Asia—			
Madagascar.....	999,653	720,248	700,000
Borneo.....	110,977	110,977	110,977
China.....	6,641,190	6,641,190	6,645,612
India (British).....	7,299,554	7,765,807	8,385,467
Japan.....	713,300	790,826	1,200,000
Korea.....	1,094,000	1,145,769	1,145,769
Malay Peninsula.....	516,750	516,750	524,997
Australasia, 7 cols.....	52,491,279	62,294,481	79,206,130
Other countries	450,000	450,000	500,000
Totals.....	\$237,833,984	\$286,803,462	\$312,307,819

The silver production of the world for 1898 and 1899 was as follows:

PRODUCTION IN SILVER IN THE UNITED STATES.

State or Territory.	1898. Com'l value (a)	1899. Com'l value (a)
Alaska.....	\$87,390	\$163,845
Arizona.....	1,310,850	1,191,600
California.....	378,690	357,480
Colorado.....	13,692,615	13,771,731
Idaho.....	3,661,492	2,859,840
Montana.....	8,633,352	10,039,680
Nevada.....	466,080	342,585
New Mexico.....	262,170	253,215
Oregon.....	74,763	83,412

South Dakota.....	189,345	208,530
Texas.....	291,300	268,110
Utah.....	3,827,773	4,279,695
Washington.....	160,215	178,740
Others.....	29,388	37,705

Totals.....\$33,065,482 \$34,036,168

(a) The average value in 1896 was 67.1c. per oz., 59.79c. in 1897, 58.26c. in 1898, and 59.58c. in 1899.

SILVER PRODUCTION OF THE WORLD.

Countries	1898. Com'l value	1899. Com'l value
America, North—		
United States.....	\$33,065,482	\$34,036,168
Canada.....	2,616,110	1,834,371
Mexico	33,546,885	32,788,565
Central America.....	957,909	862,001
America, South—		
Argentina.....	226,301	228,526
Bolivia.....	6,155,084	6,215,784
Chile	3,439,430	3,439,430
Columbia.....	971,217	980,764
Ecuador.....	4,779	4,826
Peru	3,411,116	3,411,116
Europe—		
Austria.....	764,347	772,063
Hungary.....	256,600	360,106
France.....	272,017	274,690
Germany.....	3,287,893	3,320,215
Greece.....	768,850	771,512
Italy.....	823,968	832,068
Norway.....	101,784	102,784
Portugal.....	2,267	3,481
Russia.....	164,324	155,390
Servia.....	10,812	10,919
Spain.....	4,343,922	3,245,930
Sweden.....		
Turkey.....	38,563	38,943
United Kingdom.....	138,916	134,223
Asia—		
Dutch East Indies.....	124,722	125,947
Japan.....	759	766
Australasia.....	979,326	989,154
Other countires	8,742,499	9,131,688
	28,453	28,733
Totals.....	\$105,364,505	\$104,100,163

VII.

All the indications are that the world's output of gold will continue to increase for many years to come. Not only are new processes saving gold that it was impossible to save ten years ago, but new gold camps are springing into life, and old silver mines are developing into gold propositions as greater depth is attained. We predict that within the next twenty years Alaska and the Northwest Territory will yield over \$1,000,000,000, and that by 1925 they will contain a population of over 1,000,000.

A question that is perplexing our Treasury officials is, What becomes of a great proportion of the gold that is mined and put in circulation? There is used in the arts annually—in gilding, electro-plating, and similar operations, which withdraw gold from possibility of other use—probably not less than \$10,000,000.

The use of solid gold in jewelry and plate, while not so directly a withdrawal of gold from circulation, since it can be re-melted and coined, does expose it to greater waste from friction and increased risk of loss. This use now amounts to about \$50,000,000 a year.

Gold coin loses weight constantly from trituration, not to speak of actual loss, by fire, shipwreck and carelessness.

Since the resumption of specie payments in 1879 Treasury officials estimate that \$300,000,000 has disap-

peared from circulation. The Bank of England is said to be poorer by \$100,000,000 in gold than it was in 1897. France reports an immense decrease in gold coined and in reserve, and other countries have similar stories to tell. An inquiry recently set afoot by our Treasury Department showed that the holdings of the National banks on April 26 were \$195,769,872. The Treasury holdings May 1 were \$426,989,371, the two items aggregating \$622,759,243. The estimate for May 1 was \$1,043,525,117, which left \$420,000,000 to be accounted for as held by State and private banks, trust companies, and in safes, tills, pockets and hoards.

A large amount of gold is taken out of the country by travelers. One tourist agency receives from travelers from \$100,000 to \$150,000 per year and turns it in to the Bank of England. About \$75,000 per annum is melted at Geneva, and in all a net loss of \$600,000 to \$800,000 is indicated. At the later rate in twenty-five years the total would be \$20,000,000. Inquiries made of 45,000 firms and individuals indicate a total consumption of coin by manufacturers, jewelers, dentists, etc., of \$3,500,000 per year. The official estimate of the entire stock of gold in the country was \$1,053,518,892 at the beginning of August last.

While gold disappears rapidly in the United States, India and China are virtual graveyards of the precious metal. A yellow stream flows into both countries year by year. There is no end to this stream; it is always flowing. The money does not reappear in the Indian banks.

The soil of India absorbs the golden flood just as the sands of the desert swallow the overflow of the great rivers. When it is remembered that this work of absorption has been going on with little interruption for ten centuries, and still continues under our eyes, it is easy to form an idea of the immense treasures that are hidden in that country. All this gold remains sterile, and, consequently, is lost. It is absurd to say that it is brought into monetary circulation or that it passes through the hands of the native goldsmiths. It is disseminated in innumerable places, from which it never emerges.

It is estimated that in the presidency of Bombay alone there are 12,000,000 gold sovereigns hoarded. Hundreds upon hundreds of millions of dollars lie in the hiding places of the famine stricken land. All classes are afflicted with the incurable habit of gold hoarding. The splendid Maharajahs have become shrewd enough to use banks of deposit, but there is still barbaric display of jewelled idols in the strong rooms, and of golden vessels in the Princes' apartments.

Even the gods of India, remarked a writer in the *Courrier des Etats Unis*, are very fond of gold. They whistle for it through the lips of their priests. Obedient to the divine call, it comes rippling from all points, until it reaches the sacred parvis. It accumulates in the subterranean passages of the temples, to which the priests alone have access. Thence it overflows and takes its place like a proud conqueror, upon the altars, where it shares with the gods the incense and the homage of the men whom it has bewitched.

It seems curious that while half the world is engaged in an eager search for gold, the teeming populations of India and China devote most of their energies to keeping it out of use and circulation.

